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98 Analysis of Sodium Monofluoroacetate in Aqueous Extracts By Gas Chromatography with Mass Selective Detection. D.A. Goldade and T.M. Primus, Denver Wildlife Research Center, Denver, CO. A capillary gas chromatographic method utilizing mass selective detection was developed for the determination of sodium monofluoroacetate (compound 1080) in grain baits for an acute avian dietary toxicity study. The analysis of sodium monofluoroacetate as the free acid in an acidified aqueous solvent has been previously demonstrated.[1] This study is one of a group of studies required by the EPA to maintain the registration of compound 1080 for use in the livestock protection collar. The method was evaluated at concentrations ranging from 1 μg/g to 5000 μg/g of compound 1080 using a solid-phase clean up for samples that contain between 1 to 10 μg/g compound 1080 in the avian diet matrix. An internal standard was also utilized to compensate for adsorption of the weak acids in the injection port. Also, a novel restricted gooseneck liner was used. Quantification of the compound 1080 was accomplished by utilizing a mass selective detector operating in the single ion monitoring mode. Data show that the method yields consistently high recoveries over the entire range of samples. [1] B.A. Kimball and E.A. Mishalanie, J. Chromatography, 634 (1993) 289-296.